Protocols Used at NCI & Related Information

Paraffin Embedding

This method was successful in our lab using prostate tissue and for our specific objectives. Investigators must be aware that they will need to tailor the following protocol for their own research objectives and tissue under study.

1. Materials

- 1. Sakura FineTek V.I.P. tissue processor (Sakura FineTek Inc.)
- 2. 70%, 80%, 95%, 100% ethanol
- 3. Paraffin wax (Paraplast; melting point 58°C)
- 4. Xylenes, Reagent Grade (Sigma)
- 5. Embedding molds

2. Method

- 1. Fix tissue overnight in 70% EtOH at 4°C.
- 2. Place the tissue in the tissue processor and process with the times and temperatures described in Table 1 below.

Table 1				
Station	Solution	Concentration	Time(min)	Temp(°C)
1	Ethanol	70%	30	40
2	Ethanol	80%	30	40
3	Ethanol	95%	45	40
4	Ethanol	95%	45	40
5	Ethanol	100%	45	40
6	Ethanol	100%	45	40
7	Xylenes	100%	45	40
8	Xylenes	100%	45	40
9	Paraffin		30	58
10	Paraffin		30	58
11	Paraffin		30	58
12	Paraffin		30	58

3. Embed the specimen in paraffin and block.

- 4. Cut sections at 5 to 8 μm thickness.
- 5. Both paraffin blocks and sections may be stored at or below room temperature.

TIP: Tissue processors in standard histopathology laboratories generally include formalin-fixation as the first two steps in the paraffin infiltration procedure. Make certain these steps are avoided when processing tissue intended for molecular profiling.